



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/611,855	07/03/2003	Mariko Yamada	GOTO.0005	3856

38327 7590 12/06/2006

REED SMITH LLP
3110 FAIRVIEW PARK DRIVE, SUITE 1400
FALLS CHURCH, VA 22042

EXAMINER

MILLER, BRANDON J

ART UNIT	PAPER NUMBER
----------	--------------

2617

DATE MAILED: 12/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/611,855

Applicant(s)

YAMADA ET AL.

Examiner

Brandon J. Miller

Art Unit

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 7/3/2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3, 6, 9-12 are rejected under 35 U.S.C. 102(e) as being anticipated by Wang (US 7,092,986 B2).

Regarding claim 1 Wang teaches a packet communication system comprising first and second packet communication devices that are arranged in at least first and second foreign networks, respectively (see col. 3, lines 6-8 & 22-23 and Fig. 1, mobile agent in respective foreign networks relate to packet communication devices arranged in at least first and second foreign networks). Wang teaches a plurality of foreign networks existing as networks visited by a mobile node (see col. 3, lines 6-8 & 22-23). Wang teaches when the mobile node has moved to the first foreign network, a first care-of-address is given to the mobile node (see col. 3, lines 6-13). Wang teaches when the mobile node has moved to the second foreign network, a second care-of-address is given to the mobile node (see col. 3, lines 22-25). Wang teaches after the mobile node has moved from the first foreign network to the second foreign network, when a packet addressed to the first care-of-address is transmitted, the first packet communication device forwards the packet to the second packet communication device (see col. 3, lines 25-31 and Fig. 1, mobile agent 21 establishing a tunnel for transmitting packets between the old foreign

Art Unit: 2617

network and the new for foreign network relates to first packet communication device forwarding a packet to a second packet communication device in the new foreign network).

Regarding claim 2 Wang teaches when the mobile node has moved from the first foreign network to the second foreign network, information pertinent to the second care-of-address is sent to the first packet communication device (see col. 3, lines 25-31).

Regarding claim 3 Wang teaches a packet communication system comprising packet communication devices that are arranged in a plurality of foreign networks, respectively, that are at least part of foreign networks existing as networks visited by a mobile node (see col. 3, lines 6-8 & 22-23 and Fig. 1, mobile agent in respective foreign networks relate to packet communication devices arranged in a plurality of foreign networks). Wang teaches when the mobile node moved among the plurality of foreign networks, if the packet communication device is arranged in a visited foreign network, the mobile node is given a care-of address that corresponds to the visited foreign network one by one (see col. 3, lines 6-13 & 22-25). Wang teaches the mobile node continuously sends information pertinent to the care-of-address given in the visited foreign network, after moving to a plurality of foreign networks from a predetermined foreign network, to at least one of the packet communication devices arranged in the foreign networks in which the mobile node resided previously (see col. 3, lines 25-31 and Fig. 1, a new foreign network is permitted to register a new care-of-address with the foreign agent in the old foreign network, this relates to continuously sending information pertinent to the care-of-address to a packet communication device).

Regarding claim 6 Wang teaches the packet communication device that will be a target to which information is sent continuously is selected in correspondence with at least either a state of or a communication purpose of the foreign network in which the moved mobile node resides (see col. 3, lines 25-31, foreign agent relates to packet communication device and transmitting data packets relates to a communication purpose of the foreign network).

Regarding claim 9 Wang teaches a communication network comprising first and second packet communication devices that are arranged in at least first and second foreign networks, in a corresponding manner, among a plurality of foreign networks existing as networks visited by a mobile node (see col. 3, lines 6-8 & 22-23 and Fig. 1, mobile agent in respective foreign networks relate to packet communication devices arranged in a plurality of foreign networks). Wang teaches when the mobile node has moved to the first foreign network, a first care-of-address given to the mobile node (see col. 3, lines 6-13). Wang teaches when the mobile node has moved to the second foreign network, a second care-of-address is given to the mobile node (see col. 3, lines 6-13). Wang teaches when the mobile node has moved to the second foreign network, a second care-of-address is given to the mobile node (see col. 3, lines 22-25). Wang teaches after the mobile node has moved from the first foreign network to the second foreign network, when a packet addressed to the first care-of-address is transmitted, the packet is forwarded from the first packet communication device to the second packet communication device (see col. 3, lines 25-31 and Fig. 1, mobile agent 21 establishing a tunnel for transmitting packets between the old foreign network and the new for foreign network relates to first packet communication device forwarding a packet to a second packet communication device in the new foreign network).

Regarding claim 10 Wang teaches a packet communication network comprising packet communication devices that are arranged in a plurality of foreign networks, respectively, that are at least part of foreign networks existing as networks visited by a mobile node (see col. 3, lines 6-8 & 22-23 and Fig. 1, mobile agent in respective foreign networks relate to packet communication devices arranged in a plurality of foreign networks). Wang teaches when the mobile node moved among the plurality of foreign networks, if the packet communication device is arranged in a visited foreign network, a care-of address corresponding to each of the visited foreign networks is given to the mobile node one by one (see col. 3, lines 6-13 & 22-25). Wang teaches after moving further from a predetermined foreign network to a plurality of foreign networks, information pertinent to the care-of-address given by the visited foreign network is continuously sent from the mobile node to at least one of the packet communication devices each of which is arranged on each of foreign networks in which the mobile node resided previously (see col. 3, lines 25-31 and Fig. 1, a new foreign network is permitted to register a new care-of-address with the foreign agent in the old foreign network, this relates to continuously sending information pertinent to the care-of-address to a packet communication device).

Regarding claim 11 Wang teaches a method for selecting an IP address in a mobile node (see col. 2, lines 62-67). Wang teaches arranging first and second packet communication devices in at least first and second foreign networks, in a corresponding manner, among a plurality of foreign networks existing as networks visited by the mobile node (see col. 3, lines 6-8 & 22-23 and Fig. 1, mobile agent in respective foreign networks relate to packet communication devices arranged in a plurality of foreign networks). Wang teaches giving a first care-of-address to the mobile node when the mobile node has moved to the first foreign network (see col. 3, lines 6-

Art Unit: 2617

13). Wang teaches giving a second care-of-address to the mobile node when the mobile node has moved to the second foreign network respectively (see col. 3, lines 6-13). Wang teaches after the mobile node has moved from the first foreign network to the second foreign network, when a packet addressed to the first care-of-address is transmitted to the first foreign network, forwarding the packet to the second packet communication device from the first packet communication device (see col. 3, lines 25-31 and Fig. 1, mobile agent 21 establishing a tunnel for transmitting packets between the old foreign network and the new foreign network relates to first packet communication device forwarding a packet to a second packet communication device in the new foreign network).

Regarding claim 12 Wang teaches a method for selecting an IP address in a mobile node (see col. 2, lines 62-67). Wang teaches arranging packet communication devices in a plurality of foreign networks that are at least part of foreign networks existing as networks visited by a mobile node respectively (see col. 3, lines 6-8 & 22-23 and Fig. 1, mobile agent in respective foreign networks relate to packet communication devices arranged in a plurality of foreign networks). Wang teaches when the mobile node moves among the plurality of foreign networks, if the packet communication device is arranged in a visited foreign network, giving the mobile node a care-of address that corresponds to the visited foreign network one by one (see col. 3, lines 6-13 & 22-25). Wang teaches after moving further from a predetermined foreign network to a plurality of foreign networks, sending information pertinent of the care-of-address given in a visited foreign network continuously from the mobile node to at least one of the packet communication devices each of which is arranged in each of foreign networks in which the mobile node resided previously (see col. 3, lines 25-31 and Fig. 1, a new foreign network is

Art Unit: 2617

permitted to register a new care-of-address with the foreign agent in the old foreign network, this relates to continuously sending information pertinent to the care-of-address to a packet communication device).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang (US 7,092,986 B2) in view of Watanabe et al. (US 7,031,709 B2).

Regarding claim 4 Wang teaches a device as recited in claim 3 except for wherein at least any point in time selected from a group consisting of points of time when applications are started in the mobile node and points of time when the applications having been started in the mobile node start to exchange packets via the Internet, the mobile node sends continuously information pertinent to its care of address that is acquired when, after residence in one foreign network, the mobile node has moved to another foreign network, to a packet communication device that was in service at the start of the application and is a packet communication device existing on the foreign network in which the mobile node resided. Wang does teach a point in time when an application in a mobile node starts to exchange packets via the Internet (see col. 3, lines 28-31 and Fig. 1). Wang does teach the mobile node continuously sending information pertinent to its care of address that is acquired when, after residing in one foreign network, moving to another foreign network (see col. 3, lines 25-28). Wang does teach sending the information to a packet

Art Unit: 2617

communication device that was in service at the start of the application and existing on the foreign network in which the mobile node resided (see col. 3, lines 25-28). Watanabe teaches a point in time selected from a group consisting of points of time when applications are started in the mobile node and points of time when the applications having been started in the mobile node (see col. 9, lines 24-30, the time stamps indicating current connection and lost connection relate to selected points in time consisting of points of time when applications are started and points of time when application having been started). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the Wang adapt to include wherein at least any point in time selected from a group consisting of points of time when applications are started in the mobile node and points of time when the applications having been started in the mobile node start to exchange packets via the Internet, the mobile node sends continuously information pertinent to its care of address that is acquired when, after residence in one foreign network, the mobile node has moved to another foreign network, to a packet communication device that was in service at the start of the application and is a packet communication device existing on the foreign network in which the mobile node resided because the time stamp in Watanabe (see col. 9, lines 27-28) can be used to indicate when the mobile node in Wang has moved from one foreign network to another and this would improve the transmitting packets between packet communication devices via the Internet that Wang is concerned with accomplishing (see col. 3, lines 28-31).

Regarding claim 5 Wang and Watanabe teach a device as recited in claim 4 except for wherein the mobile node stops continuation of sending of the information to the packet communication device that was in service at the start of the application after the application has

Art Unit: 2617

ended. Wang does teach wherein the mobile node sends information to a packet communication device at the start of an application (see col. 3, lines 25-31). Watanabe teaches a mobile node that stops communication with a packet communication device that was in service (see col. 8, lines 60-63, losing connection with an access router would inherently stop continuation of sending information and end any application previously started). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the Wang adapt to include wherein the mobile node stops continuation of sending of the information to the packet communication device that was in service at the start of the application after the application has ended because it would improve the transmitting packets between packet communication devices via the Internet that Wang is concerned with accomplishing (see col. 3, lines 28-31).

Claims 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang (US 7,092,986 B2) in view of Funabiki et al. (US 2005/0020265 A1).

Regarding claim 7 Wang teaches a device as recited in claim 3 except for when the number of hops between the packet communication device when the information started to be transmitted and the packet communication device existing on the foreign network in which the mobile node now resides exceeds a predetermined value, continuation of sending of the information is stopped. Wang does teach a number of hops between the packet communication device that information was first transmitted from and the packet communication device existing on the foreign network in which the mobile node now resides (see col. 3, lines 25-31, moving from one foreign network to another relates to number of hops). Funabiki teaches when the number of hops between a packet communication device where the mobile node was previously located and the packet communication device existing on a network in which the mobile node

Art Unit: 2617

now resides exceeds a predetermined value continuation of sending of the information is stopped (see paragraph [0012] & [0155], switching over the home agent inherently involves a stoppage of communication). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the device adapt to include when the number of hops between the packet communication device when the information started to be transmitted and the packet communication device existing on the foreign network in which the mobile node now resides exceeds a predetermined value, continuation of sending of the information is stopped because the hop count in Funabiki (see paragraph [0155]) can be used to indicate when the mobile node in Wang has moved from one foreign network to another and it would improve the transmitting packets between packet communication devices via the Internet the Wang is concerned with accomplishing (see col. 3, lines 28-31).

Regarding claim 8 Funabiki teaches conditions setting means that allows the user of the mobile node to set conditions in advance (see paragraphs [0125] & [0126]). Funabiki teaches wherein when conditions are satisfied continuation of sending the information is stopped (see paragraph [0012] & [0155], switching over the home agent when hop count is exceed inherently involves a stoppage of communication).

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-3 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1-2 recites the limitation "the mobile node" in lines 5-6 and line 3 respectively. There is insufficient antecedent basis for this limitation in the claim.

Claim 3 recites the limitation "the predetermined foreign network" in line 14. There is insufficient antecedent basis for this limitation in the claim.

Claim Objections

Claim 4 is objected to because of the following informalities: The word "at" appears twice in line 3. Appropriate correction is required.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Mukherjee et al. Pub. No.: US 2004/0081118 A1 discloses a method and apparatus for providing user identity based routing in a wireless communications environment.

Borella et al. Pub. No.: US 2003/0229697 A1 discloses a method and apparatus for global server load balancing.

Inoue et al. Pub. No.: US 2002/0191576 A1 discloses a mobile computer communication scheme supporting moving among networks of different address systems.

Tsai et al. Pub. No.: US 2004/0029555 A1 discloses a system and method for supporting mobile Internet protocol using multiple separate tunnels.

Leung et al. Pub. No.: US 2003/0224788 A1 discloses mobile IP roaming between internal and external networks.

Adatrao et al. Pub. No.: US 2003/0158938 A1 discloses methods of performing mobile IP registration in a wireless communication system.

Art Unit: 2617

Thubert et al. Pub. No.: US 2004/0202183 A1 discloses an arrangement for establishing a bidirectional tunnel between a mobile router and a correspondent node.

Sakakura U.S. Patent No. 7,103,023 B2 discloses a radio communication control station, radio communication terminal, home agent, and radio communication method.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brandon J. Miller whose telephone number is 571-272-7869.


The examiner can normally be reached on Mon.-Fri. 8:00 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, George Eng can be reached on 571-272-7495. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



December 4, 2006



GEORGE ENG
SUPERVISORY PATENT EXAMINER